



# PM1 Pachymeter

Ophthalmic Series

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# PM1 Pachymeter

The first of Occuity's revolutionary handheld optical ophthalmic devices, the PM1 Pachymeter allows central corneal thickness measurements to be taken in seconds.

To take a measurement, the operator simply touches the screen to put the pachymeter in scanning mode and holds it up to the patient's eye. The PM1's advanced Precision Optical Technology provides feedback to help the operator to position the device correctly. Once aligned the PM1 captures data hundreds of times per second before calculating and displaying a precise CCT measurement.

There is no need to anaesthetise or touch the eye, reducing the risk of infection transmission and making the whole process quick and safe for both the operator and subject.

**Measure corneal thickness...  
in seconds**

### Non-contact

No need to anaesthetise or touch the eye - improving patient experience

### Handheld

Desktop capability, handheld utility

### Easy to Operate

The PM1 requires no training

### Reduced Chair Time

Results in just a few seconds

### Safe

Significantly reduced risk of disease transmission and injury

### Accurate

Measure corneal thickness accurately, reliably and repeatably

### Cost Effective

Desktop performance, handheld pricing

### Wireless Charging

Ready when you need it

### No Consumables

No waste, no waiting



## Features & Benefits

### Non-contact

#### A great clinician and patient experience

The PM1's non-contact capabilities make it totally pain-free, requiring no anaesthetic drops and delivering a comfortable experience for both the clinician and the patient.

### Accurate

#### Measure corneal thickness, accurately, reliably and repeatably

The PM1 delivers reliable, repeatable CCT measurements with a target accuracy of  $\pm 10$  microns.

The PM1 is currently undergoing CE certification and FDA approvals.

### Handheld

#### Desktop capability, handheld utility

The PM1's compact design makes it easy to carry and store. You can use it handheld or if you prefer, in a slit-lamp adapter (coming in 2023), making it perfect for both clinical and non-clinical settings.



### Reduced Chair Time

#### Results in just a few seconds

As the PM1 is non-contacting, there is no need to wait for anaesthetic eye drops to take effect. This significantly reduces the overall time it takes to make a measurement.

### Easy to Operate

#### Intuitive design means no training is required

The PM1's touchscreen interface has been thoughtfully designed making it easy and intuitive to use. Clinical staff and technicians can become proficient with just a few minutes of practice.

### Safe

#### Reduced risk of disease transmission and injury

With its generous working distance, the PM1 never needs to touch the eye – significantly reducing the potential risk of cross infection and accidental damage to the cornea. In particular, the PM1's non-contacting capability enhances COVID-19 safety.



 **No Consumables****No waste, no waiting**

Removing the need to contact the eye, removes the need for anaesthetic eye drops, waiting and cleaning times. This reduces costs, waste, downtime, and the risk of damaging equipment through cleaning. The PM1 was designed with sustainability in mind.

 **Wireless Charging****Ready when you need it**

The Occuity PM1 will always be ready thanks to the innovative wireless charging cradle. Once placed back on the cradle, the battery will charge automatically. The cradle also contains a built-in reference artefact so the device can automatically perform a self-check when required giving confidence in its reliable operation.

 **Cost Effective****Desktop performance, handheld pricing**

Enjoy the accurate measuring and non-contact capabilities of expensive optical desktop devices at a price point comparable to existing contacting ultrasound devices.

 **SL1- Slit Lamp Adapter****Hands Free**

Whilst the PM1 Pachymeter is perfect for handheld use, it can also be used on a slit lamp thanks to the simple but effective SL1 slit-lamp adapter.

The SL1 slit-lamp adapter can be purchased separately



# Precision Optical System

The patented optical technology within the Occuity PM1 uses a tightly focused beam of light to scan the eye. When the focus passes through a surface a bright reflection is seen which allows the meter to know exactly where that surface is.

The PM1 collects the reflections from the front and back surfaces of the cornea, allowing a very precise measurement of corneal thickness.

With our expertise in optics and miniaturisation, Occuity's proprietary technology ensures that in addition to being accurate, the PM1 is also compact and very cost effective.



**Watch Video**



The Occuity PM1 Pachymeter makes it easier and safer to measure central corneal thickness in just a few seconds.

# Comparison

	Occuity PM1	Ultrasound Pachymeters
<b>Technology</b>	Optical	Ultrasound
<b>Contact</b>	Non-contact	Multiple contacts of the cornea
<b>Total Measurement Time</b>	Full measurement in seconds	Full process takes several minutes
<b>Risk</b>	Significantly reduced risk of disease transmission and injury	Risk of accidental corneal damage & infection transmission
<b>Cleaning</b>	Minimal cleaning required between patients	Clinical cleaning required between every patient
<b>Consumables</b>	None	Anaesthetic drops, cleansing wipes, replacement probes
<b>Operators</b>	Healthcare professionals	Specialist trained clinicians only
<b>Training</b>	Intuitive design with limited training required	Specialist device and anaesthetic training required
<b>Display</b>	TFT touchscreen display	Generally basic LCD screens

## Technical Specification\*

<b>Model</b>	PM1
<b>Device Type</b>	Pachymeter
<b>Overall dimensions</b>	17.5 cm x 15 cm x 4.5 cm
<b>Weight</b>	345 g
<b>Display</b>	3.46" Colour LCD
<b>Laser source</b>	Group 1(BS EN 15004-2:2007)
<b>Measurement units</b>	µm
<b>CCT measurement range</b>	300 µm to 800 µm
<b>CCT measurement accuracy</b>	± 10 µm
<b>CCT measurement precision</b>	± 5 µm
<b>Scanning frequency</b>	200 scans per second
<b>Measurement time</b>	< 10 s
<b>Measurement resolution</b>	1µm
<b>Battery</b>	Li-ion 7.4 V1050 mAh
<b>Charger</b>	Input: 100-240 V at 50/60 Hz (Universal)
<b>Charging Time</b>	Up to 4 hours
<b>Auto power-off when idle</b>	20 minutes

\*This technical information is for guideline purposes only and is subject to change pending regulatory approval and CE marking. For more information please contact us.

# About Occuity

Founded in 2019, Occuity is a UK-based medical technology company specialising in the research, design, and production of handheld non-contact optical instruments for use in healthcare, diagnostics, and monitoring.

## Optometry & Ophthalmology

Occuity are developing a range of devices within our Ophthalmic series and our first device, the Occuity PM1, is the world's first handheld, non-contact, optical pachymeter. Building upon the underlying technology in the PM1, our pipeline of future products will enable other measurements within the eye including axial length, pupillometry and keratometry for use in both human and veterinary optometry.

## Disease Screening

Building upon our existing technology, Occuity's disease screening products are planned to make it easier and cheaper to screen for diseases such as diabetes and Alzheimer's in non-clinical settings such as high street opticians and care homes.

## Disease Monitoring

Occuity plan to deliver the Occuity Indigo - the world's first non-invasive, non-contact glucose meter which can determine blood glucose levels by measuring subtle changes within the anterior chamber of the eye.

Find Out More - [www.occuity.com](http://www.occuity.com)

Find Out More:



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The availability of products and features may vary by country. Occuity reserves the right to change product specifications and design. All information is valid at the time of production (01/23).

EN ISO 13485:2016 Certified

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